

67th IFLA Council and General Conference August 16-25, 2001

Code Number: Division Number: Professional Group: Joint Meeting with: Meeting Number: Simultaneous Interpretation: 184-180(WS)-E VIII Regional Activities: Asia and Oceania Workshop -180

The use of Logframe analysis for information-specific development projects

-

Dr G E Gorman

Professor of Information Management Victoria University of Wellington Wellington, New Zealand

Background

All development projects in the library and information sector should be viewed as existing within a project management cycle. It is important to recognise from the outset that each stage in the project cycle is part of an integrated process in which the stages build upon one another, and that the stakeholders are involved in every stage.

First, the *identification stage* involves the various processes which identify library development projects that meet the funding agency or host institution priorities and sets the broad goal and objectives of the project.

Second, the *preparatory stages* help create a more complete understanding of the project design and identify the impacts that are likely to flow from the project. A feasibility study is often one of the preparatory stages.

Third, the *project design* provides a full picture of the activities and inputs that will help achieve the project objectives. It includes identification of the indicators through which progress should be measured.

Fourth, the *implementation stage* is the process of managing the inputs and activities established in the project design to obtain the desired outputs and achieve the objectives of the project. Monitoring is an important part of implementation and includes monitoring the efficiency with which project inputs are used to achieve the outputs, as well as the effectiveness of project activities.

Fifth, in its *completion stage* the project should have achieved its objectives and be set up to provide sustainable benefits. The extent to which objectives have been achieved can be assessed through a project completion report.

Logical Framework Analysis

These steps in the library development project management cycle can be linked together systematically through a logical framework analysis or logframe, which is an analytical tool for planning, design and management of projects. *It is a systematic way of identifying the elements of a development project and the links between them to provide an objective analysis of the project design.* This systematic approach ensures that links and feedback between different stages are incorporated into the project management cycle. The logframe also keeps the primary purpose of projects uppermost: the sustainability of project achievements for the intended beneficiaries.

Uses of the Logframe Methodology

• to identify development projects that meet funding agency and development recipient needs and priorities

- to design projects in a systematic and logical way, identifying risks and constraints
- to implement projects through effective and efficient use of resources, and managing risks identified in the project design
- to monitor progress by identifying indicators that are critical these may be institutional, economic, social
- to promote participation by all stakeholders in planning, design and implementation of projects

The result of the analytical logframe process is a matrix (see Figure 1) that is useful for setting out the design elements of a project. The logframe is not a static document but should be reviewed and revised in light of experience during project implementation.

Figure 1. The Logframe Matrix

Summary	Indicators	Means of Verification	Risks and Constraints	Risk Management
Goal: the broader goal to which the project contributes	measures of achievement of the goal	sources of information methods used	matters that affect the goal-objective links, including those outside the project's control	specific strategies both within and outside the the project's control
Objectives : the condition primary purposes of the project, and especially a base for ongoing benefits	ons at the source project's conclusion showing that the objectives have been achieved	s of information matters methods used	that affect the project objective-output links	-specific activities that help address the risks and constraints
Outputs : direct and measurable results of the project that help achieve objectives	value and quality of the outputs	sources of information methods used	matters that affect the output-activity links	project-specific activities that help address the risks and constraints
Activities: actions undertaken and targets resources needed for project implementation	monito	s of information matters bring methods used	affecting the should successful completion of project activities	be addressed by other activities or by way activities are undertaken

Formulating the Logframe

The formulation of a logframe involves systematic analysis of the different components of the development project. It consists of four inter-related steps.

• The *first step* is identification of a goal based on the reasons for the project. The goal may not necessarily be reached until well after the project has been implemented. The project should contribute to the achievement of the goal but in fact may not be sufficient to achieve this on its own merit. Remember that the more specific the goal within the information setting, the better the chances of achieving it.

• The *second step* is formulation of the desired objectives in consultation with all stakeholders. The objectives are a more precise and immediate statement of what the project is expected to achieve at completion. The number of objectives should be very limited – perhaps only three or four. Remember that the smaller the number of objectives, the better the chances of achieving them.

• The *third step* is determination of the outputs which describe the expected results of the project which would help to achieve its objectives.

• The *fourth step* is the description of project activities, which are the actions to be carried out (and the resources required) to implement the project.

Format of the Logframe

The result of the logframe analysis is normally presented as a matrix of four rows and five columns which provides a summary of the project design (Figure 1). This summary describes the project components, outlines how the project may be monitored, describes the risks and constraints, and suggests how these are to be managed through a process of vertical and horizontal logic.

• *Column 1 (Summary)* - records the hierarchy of goal, objectives, outputs, and activities – the why, what and how of the development project.

• *Column 2* ((*Indicators*) - states what indicators can be used to measure the achievement of the goal, objectives, outputs, and activities.

• Column 3 (Means of Verification) - states how these are to be measured.

• *Column 4 (Risks and Constraints)* - identifies the risks and constraints under which the project will be operating.

• *Column 5 (Risk Management)* - describes how these risks and constraints will be managed or taken into account in the design of the project.

Vertical structure

The vertical structure of the logframe methodology is based on cause and effect - if the means are provided, then the ends will be achieved. Each level provides the rationale for the next level down: the goal helps to define the objectives, and the objectives define the outputs, etc. The

successful completion of each level of the hierarchy is a prerequisite for achieving the next higher level. Thus project inputs and activities produce outputs; these outputs are expected to achieve the project objectives; achieving the project objectives contributes to the attainment of the goal (see Figure 2 below).

Three conditions are important in the vertical logic structure.

• First, achieving the objectives is necessary but <u>not</u> sufficient for attaining the goal. This is because the project is probably just one of a number of projects or initiatives that contribute to a programme, sector or national level goal – remember that projects never exist in isolation.

• Second, producing the project outputs is necessary but <u>may not</u> be sufficient for achieving the objectives – remember that outputs alone are inadequate.

• Third, carrying out project activities is <u>necessary and sufficient</u> to produce the required outputs – remember that carrying out the activities allows achievement of objectives through outputs embedded in activities.

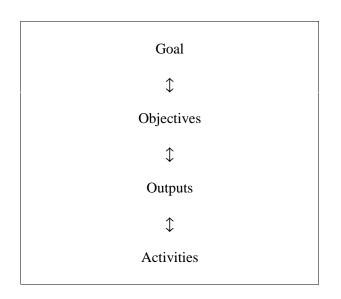


Figure 2. Vertical Structure of the Logframe

Horizontal structure

The horizontal structure (see Figure 3 below) begins with a description of different hierarchical levels of the project: the goal, objectives, outputs and activities. The next two columns establish the basis for monitoring and evaluation and indicate how the achievement of the results at the different levels is to be measured.

Goal	Indicators \rightarrow Means of verification \rightarrow Risks and constraints \rightarrow Risk management
\$	
Objectives	Indicators \rightarrow Means of verification \rightarrow Risks and constraints \rightarrow Risk management
\$	
Outputs	Indicators \rightarrow Means of verification \rightarrow Risks and constraints \rightarrow Risk management
\$	
Activities	Indicators \rightarrow Means of verification \rightarrow Risks and constraints \rightarrow Risk management

What Indicators Should Be

• a measure of results, impacts or activities that are important to achieving the project objectives

• a plausible measure of what the project is trying to achieve

• sufficient to give an indication of success or failure

• independent of other factors so that only one particular set of measurements is required for each indicator

• verifiable as part of the project

• precisely defined in terms of nature, quality, quantity and timing

The selection of indicators can assist in the design of a project. Where it is difficult to find an indicator for an objective, the reason could be the definition of the objective statement. This should lead to a re-examination of the objective and possibly a re-statement to something that can be reflected by an indicator— that is, a measurable outcome.

The process of relating indicators to objective statements helps to modify the project design and makes it more realistic and achievable. Indicators of a general nature tend to broaden the scope of the project, while specific indicators tend to restrict it – usually the more restricted or limited, the better.

The third column, the means of verification, records the sources of information, and the methods of data collection and analysis used to check on the indicators. These include national or sectoral statistics for the goal, project data and surveys, etc. for the objectives, and project data (including on-going monitoring) for the outputs and activities.

The fourth column, the risks and constraints, identifies factors that directly affect the vertical logic of the analysis. The 'if-then' links of vertical logic only function if the important assumptions and constraints are identified, made explicit and managed. This column is critical to the successful implementation of the project design as it identifies:

• how other factors (e.g. political or cultural), beyond the control of the project might affect it

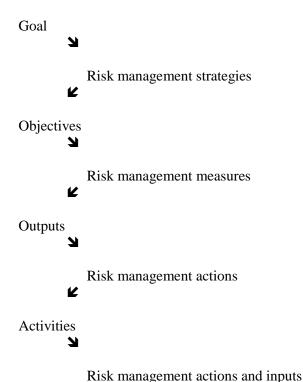
• the risks in the project environment which would undermine the success of the project unless properly managed

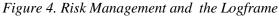
• the potential social and environmental impacts of the project activities that should be managed by the project design.

This column therefore expands the 'if-then' vertical structure of the logframe analysis to a series of hypotheses that state 'if, and assuming that, then...'. This helps to make explicit the logical structure of the planned project.

The final column, risk management, describes how the manageable risks and constraints will be dealt with in the design of the project. External risks and constraints should also be identified in the logframe during the analytical process, and their importance determined. Indeed, throughout this process risk management should be a key consideration, with risks considered at every stage (see Figure 4 below).

The risk management column should indicate those activities outside the scope of the project that will deal with the risks that are deemed most important. If these risks and constraints are likely to pose a major threat to the success of the project and are unlikely to be managed by external factors, then a re-examination of the project rationale may be necessary. At the activity level, the risks and constraints that are likely to affect the performance of activities are managed by ensuring that certain conditions are met prior to project implementation.

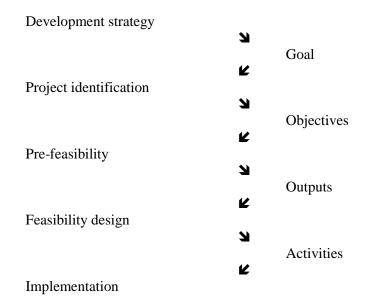




Using the Logframe

The logframe provides a summary of the project design and can be used throughout the project cycle (see Figure 5 below). Ideally, the process of developing a logframe should begin at the project identification phase with a statement of the overall goal and suggestions for possible project objectives.

The finer details of the project will then be spelled out in subsequent stages of the project management cycle. The feasibility stage provides details of the activities and inputs necessary to obtain the planned outputs. The design stage completes the logframe, adding details such as monitoring criteria. During implementation the logframe serves as a checklist of activities and inputs, as well as criteria for monitoring.



The process of formulating the project design and developing the logframe is not always a linear process as set out in Figure 5. For example, a project identification mission may suggest possible outputs and activities in addition to identifying the goal and objectives. Subsequent stages of the project cycle may then analyse, elaborate, confirm, reject or modify these elements: each stage of the project cycle is a further definition of project components.

Developing the Logframe

How do we develop a logframe analysis? Using a practical example of a library-based project to illustrate the major points, we present a logframe template in Figure 6 below and a real-life completed logframe matrix in the Appendix. The best way to develop a logframe is to use a participatory process involving all stakeholders to analyse the need for the project, its aims, and the components that would help to achieve these aims and meet the needs.

Figure 6. Logframe Outline

Narrative		Indicators		Means of Verification	Risks and Constraints	Risk Management	
Goal		٠		•	٠	•	
Objective		٠		٠	٠	•	
Output	٠		٠		•	٠	
Activity		٠		٠	٠	•	

The goal

The goal is a single statement of the overall development aim of a project and may be linked to a wider national, regional or sectoral plan. In the Appendix, which is the logframe for Information Networks for the Future, an actual project funded by the New Zealand Ministry of Foreign Affairs and Trade, the goal is:

to facilitate the development of Vietnam's capability in science and technology (S&T) information by the introduction of: effective S&T information infrastructures through training, and effective exchange of S&T information via Vietnamese institutions.

In some cases the goal may be very specific; this limits the scope of the project.

Key Points about Project Goals

- there should be only one goal per project
- the goal should be focused and achievable
- the goal should not be too broad or ambitious
- the goal may be wider than the project itself

The indicators are a measure of the contribution of the project results to achievement of the overall goal in terms of timing, quality, impacts, and sustainability. The last is particularly important, as it provides a measure of whether the project has provided the basis for lasting benefits. In the sample project the goal-focussed indicators are:

establishment of a Vietnam-wide S&T information infrastructure evidenced by the appointment of persons responsible, establishment of a formal network of institutions using the information infrastructure.

Such indicators are usually verified at the evaluation and compared with baseline information obtained at the beginning of the project. The means of verification are the sources of information at the national and sectoral levels, usually national statistics, which can be used to obtain the necessary data.

The risks and constraints identified at this stage affect the overall rationale for the project. These risks and constraints should include:

• those that are to be addressed within the project itself

• those that are outside the immediate project but are likely to be addressed through other activities and initiatives

• those that could pose a threat to the success of the project as they cannot be addressed, either within or outside the project.

The risks and constraints at the goal level help to provide an indication of the potential areas for significant social and economic impacts of the proposed project. These impacts should then be looked at critically during the screening process. Any significant negative impacts at this level are likely to be a symptom of a faulty rationale in the project selection.

Risk management strategies at the goal level indicate what objectives are needed to contribute to the achievement of the goal. Specific objectives can be set for those risks and constraints that can be managed within the project. Those that cannot be managed within the project are identified, along with an indication of whether they will be addressed elsewhere, in other projects, for example. If a risk cannot be managed within the project or by other factors, this indicates a faulty rationale at the goal level and has significant implications for the success of the project.

The Objectives

The objectives are the primary reason for the project – in the Appendix there are three principal objectives, perhaps too many for a project of this magnitude (just 100,000 from the New Zealand government). The objectives are derived from the problems that the project is designed to address, the developments expected during the project or the expected situation at the end of the project. A primary consideration is sustainability - whether the project is able to establish the basis for lasting benefits.

Key Points about Project Objectives

• the objectives should be stated explicitly and not be just the goal or output statements reworded

- a project may have more than one objective, but the number of objectives should be limited to reduce complexity too many objectives means that the goal is too broad
- the objectives should be realistic, the results measurable and the achievements sustainable

The indicators measure the conditions that show whether the purpose of the project has been achieved at its conclusion. The indicators should be determined by the feasibility study in consultation with the intended beneficiaries and any partner institutions. The risks and constraints identified in the logframe for the project goal should help to identify these indicators. In the Vietnam project the first objective, 'to initiate information policy formulation and have effective policy in place by 2003', has three means of verification:

existence of Vietnamese information policy documents on government information and for science and technology use, policy documents meet international standards, a formal review of policy documents by government agencies and other stakeholders.

What Indicators Should Measure

- quality (what)
- quantity (how much)
- time (when)
- locality (where)
- responsibility (by whom)
- beneficiaries (for whom)

The means of verification are the sources of information at various levels - project, local, sectoral - which can be used to obtain the necessary data. These are used at the completion of the project and may be obtained directly from the data gathered during the project itself, or by surveys and questionnaires during the evaluation study, to compare against baseline data.

The risks and constraints identified at this stage will influence the design of the project. They help to identify the potential social, economic and other impacts resulting from the project, as well as the potential political, cultural and social constraints that may affect the success of the project.

The risk management measures described at the objective level will identify what outputs are required to achieve these objectives within the project design. At least most of the risks identified at the objective level should be managed by the project itself. Any risks deemed unmanageable at this stage have important implications for the project design and may be an unacceptable risk for the project's success.

Outputs

Project outputs are the direct and measurable results expected from carrying out the project activities. The outputs are the logical steps required to meet the project objectives. They should be action-oriented and give a clear picture of the final results of implementing the project. The indicators measure the quality and magnitude of the outputs and the effectiveness with which the outputs meet the expressed needs of intended beneficiaries.

The risks and constraints described for the objectives in the logframe identify the factors that are critical to the project's success and those that would be most useful in monitoring impacts. The means of verification are the sources of information at the project level which can be used to obtain the necessary data. The information collected during project implementation and monitoring, as well as specific surveys carried out during reviews, help to provide this data.

The risks and constraints identified at this stage will determine the design of the project. These should include the various impacts of the proposed project outputs identified during the project appraisal process. The risks and constraints to the achievement of desired objectives through the effective use of project outputs should also be identified here.

The risk management column provides a basis for deciding what activities are necessary to ensure the success of the project and how they should be implemented. This column helps to define the process used in carrying out activities. These activities may contribute directly to one particular output, or to more than one output, but all the risks identified at the output level should be addressed within the current project itself.

Activities

Project activities are the precise tasks carried out using resource inputs in order to achieve specific outputs. These include activities such as training (for example, of library staff), institutional strengthening (for example, developing infrastructure policies at various levels) and technical co-operation (probably the most sought after area for development assistance at present). Inputs may be individuals, technical equipment or funding. At this level of the logframe the timing, costs and quantities of inputs should be specified. The roles and responsibilities of the intended beneficiaries and other stakeholders could also be specified.

The indicators are a measure of magnitude and quality of the actions being carried out and the efficiency with which these activities are being implemented: these are the monitoring criteria. The indicators at the activity level should be measures of quality (what), quantity (how much), time (when), locality (where), responsibility (by whom), and beneficiaries (for whom).

The information for monitoring should be collected on a regular and routine basis and look critically at the development impact of project activities. The purpose of ongoing monitoring is to bring problems to the attention of project staff at an early stage so that remedial action can be taken to redress the shortcomings.

Involvement of project stakeholders in monitoring is an effective way to ensure ownership of the project by the stakeholders as well as helping to identify possible solutions to problems. The risks and constraints described for the outputs, as well as the impacts identified during appraisal, provide a useful checklist for the types and content of the indicators used for monitoring.

The means of verification are the sources of information at project level which can be used to obtain necessary data. Much of this should be collected as part of the project implementation. The use of surveys, self-monitoring, and periodic reports can be used to obtain the information.

The risks and constraints identified at this stage will affect the successful completion of project activities. The risks and constraints should include those that affect the efficient use of project resources and the way project activities are carried out.

At the activity level, the risk management column identifies how risks will be managed by other activities of the same project, by the requirement for certain preconditions before the start of the project, or by the way in which the activities are to be carried out.

Conclusion

Logical framework analysis is an excellent tool for planning, implementing and monitoring of a wide range of information-specific development projects. The process of developing a logframe allows project planners to work out the essential components of a project design in a systematic and logical manner, keeping a strong focus on desired outcomes.

The logframe can become restricting if the methodology is used to justify a 'blueprint approach' to planning. This is likely to happen if there is an undue focus on quantitative indicators and the logframe is implemented in a rigid manner. However, when the logframe is used flexibly and a

consultative approach is taken, it can be a valuable tool in development project planning and implementation, with advantages that outweigh the potential disadvantages.

Advantages of Using the Logframe

• It encourages planners to see their projects within the context of wider national or sectoral development goals.

• It allows project planners to identify the interrelated activities of a project in a systematic way and provides a holistic view of the project management cycle.

• It allows the project objectives and results to be identified clearly and helps ensure consistency throughout the project.

• It assists project planners in identifying and articulating risks and constraints and devising solutions to them.

• It provides a structured starting point for identifying activities, implementation details, costs, and monitoring criteria.

• It provides a framework for reporting.

• It provides an insight into the extent of project management control.

• It provides a summary of the project design that can be used for communicating details of the project to all stakeholders.

Bibliography

Coleman, G. (1987) 'Logical Framework Approach to the Monitoring and Evaluation of Agricultural and Rural Development Projects'. *Project Appraisal* 2: 251-259.

Cracknell, B.E. (2000) *Evaluating Development Aid: Issues, Problems and Solutions*. New Delhi: Sage Publications.

Jackson, B. (1997) Designing Projects and Project Evaluations Using the Logical Framework Approach.

<http://w3.iprolink.ch/iucnlib/themes/ssp/lfa.htm>

SIDA. Methods and Institutional Development Unit (1996) *Guidelines for the Application of LFA in Project Cycle Management*. Stockholm: SIDA.

Wiggins, S., and Shields, D. (1995) 'Clarifying the "Logical Framework" as a Tool for Planning and Managing Development Projects'. *Project Appraisal* 10: 2-12.

About the Author

Dr G E Gorman (BA, MDiv, STB, MA, GradDipLib, PhD, FLA, FRSA) is Professor of Information Management at Victoria University of Wellington and Director of Information Networks for the Future, a joint Viet Nam-New Zealand project based at the National Centre for Scientific and Technical Information and Documentation in Ha Noi. He has long experience as a researcher and academic in SE Asia, having lived and worked in Hong Kong and Macau, Thailand and Viet Nam. Prominent among his editorial activities are the editorship of *Online Information Review* (Emerald/MCB), the *International Yearbook of Library and Information Management* (Library Association Publishing) and associate editorship of *Library Collections, Acquisitions and Technical Services* (Elsevier). His most recent books include *Library and Information Review in China* (Scarecrow Press), *Managing Information Resources in Libraries* (Library Association Publishing) and the soon-to-be-released *Evaluation of Library Collections* (Aslib).

Appendix: Logframe for Information Networks for the Future

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
GOAL				
 To facilitate the development of Vietnam's capability in S&T information by the introduction of: Effective S&T information infrastructures through training Effective exchange of S&T information via Vietnamese institutions 	 Establishment of a Vietnam- wide Science and Technology information infrastructure evidenced by the appointment of persons responsible Establishment of a formal network of institutions using the information infrastructure 	 Increase in the use of centralised and distributed information depositories by key stakeholder groups: government NACESTID science and technology institutions universities 	 Lack of government commitment Lack of skilled practitioners Costs of global information 	 Information to, and education of, government officials Ongoing training programmes Broad acceptance of policy initiatives in Vietnam Commitment of MOSTE and NACESTID Commitment of professional bodies

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Objective 1 To initiate information policy formulation and have effective policy in place by 2003	 Existence of Vietnamese information policy documents on government information and for science and technology use Policy documents meet international standards a formal review of policy documents by government agencies and other stakeholders 	 Report of policy document review published Written evaluation of policy review against accepted international standards 	 Lack of government commitment Lack of inter- ministerial cooperation Implications involved in monitoring policy implementation 	 Work with government officials on policy construction Build relations with key stakeholders and individuals responsible for input to policy Demonstrate benefits in international and national networking
Objective 2 To create information management skills development by training Vietnamese counterparts in development databases, indexes, networks and educational material produced to a high standard	 Evidence of stakeholders and participants being involved in the planning, development and construction of working databases on science and technology in Vietnam Publication of training materials in English and Vietnamese in manuals that can be transferred to other persons and to other trainers to disseminate the training programme Initiation of a process of written evaluation of the training materials following a review by trainers, by the participants and by the government institutions involved 	 each year of the project The training programme and written annual review will be tested against published criteria established at the beginning of the project 	 Acquisition of skills to necessary level Skill maintenance Equipment maintenance 	 Training programme addresses skills acquisition Train the trainer as part of training programme Ongoing contact with project partner Education about the importance of equipment maintenance

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Objective 3To monitor programme establishment and evaluation by:• Ensuring that information systems reach target audiences and influence practice• Ensuring that educational programmes reach target audiences and influence practice, and that• systems and programmes developed and implemented meet published criteria	 Collected evidence of use of the training programmes in the targeted institutions and within other Vietnamese government agencies Collected evidence of the impact of the training on the practices of stakeholders 	 Survey of participants on the effectiveness of the training programme on their work practices Publication of annual evaluations and reports to both the Vietnamese stakeholders and MFAT in English and Vietnamese Publication of a final report at the end of the project 	 Skill levels not adequate User needs not met 	 Ongoing evaluation of training to ensure skill level adequate Ongoing evaluation of user needs to ensure programme relevance

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
OUTPUTS				
 Output 1 To ensure information policy is well established, facilitated and adopted by all sectors by making: policy documents available and endorsed by key stakeholders, and by ensuring that policy parameters meet international standards 	• Collect evidence with Vietnamese counterparts that policy influences decision- making, that resource allocation follows policy, and that the legislative framework in Vietnam supports policy	 Survey of stakeholders to discover use of information infrastructure and the ease of use within the legal and authoritative structure in Vietnam Survey across a wide range of affected stakeholder institutions to measure of effectiveness distribution of outcomes Vietnamese government information policy viewed 	commitment	 Key stakeholders maintain pressure on government members Education of senior civil servants in key ministries
Output 2 To promote planning and adoption of a national information infrastructure with efficient IT networks throughout country	 Evidence of the adoption of a plan to expand the information infrastructure and information networks in Vietnam Evidence of a long-term strategic plan to ensure information dissemination across all sectors of Vietnam 	 Government planning and inclusion of policy development in official documents Citing of official documents and, where practical, evidence that networks are evaluated regularly 	 Lack of investment capital Lack of government funding Lack of government commitment 	 Policy framework supports investment Government commitment maintained by pressure from key stakeholders Competitive advantage demonstrated in business plans

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Output 3 To enable dissemination of applied research and development by ensuring that knowledge in recent publications and electronic documents is used to develop practice in agriculture, industry, etc. in all regions	 Evidence of the use of the applied research in both central and regional government and institutional documents Evidence that the research is applied in workplaces as part of the implementing the national information policy 	 Vietnamese stakeholders in a sample of regions will be surveyed for evidence of use of such publications Vietnamese stakeholders in a sample of regions will be surveyed for examples of change in practice due to such interventions 	 Inadequate uptake of technology for electronic transmission of knowledge Documents not in appropriate or accessible language Local practitioners averse to change 	 Training programmes on use of technology in regions Monitoring of documents for accessible language Clear demonstration of benefits of change accompany new knowledge
Output 4 To develop multimedia presentations of applied research findings and ensure that such presentations take place in all regions, and to enable skills development by the Vietnamese stakeholders in multimedia production for training	 Production of a multimedia presentation about science and Technology information in Vietnam produced in Vietnamese Confidence in the use of the materials produced by the Vietnamese stakeholders at all levels from senior management down to field workers and staff in Vietnamese institutions 	 Survey of regions and local NACESTID centres to ascertain use of presentations Local attendance at presentations meets agreed levels and expectations of the Vietnamese counterpart 	 Presentations not of adequate standard Lack of local interest 	• Training programmes of high standard

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
ACTIVITIES Workshop 1 (<i>National</i> <i>Information Policy and</i> <i>National Information</i> <i>Needs</i>) To plan and conduct a workshop which will train attendees on the nature of a national information policy and enable evaluation of national information needs in Vietnam	 Participants will be able to: create a plan for a national information needs analysis undertake a needs analysis for information collection, dissemination, and archiving understand and apply policy formulation and implementation procedures 	 Production of outputs in written form from each participant in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs Workshop is well conducted and meets training needs 	 Participants' English language skills inadequate Workshop too advanced for participants' basic knowledge 	 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Workshop 2 (<i>Digitising</i> <i>National Resources</i>) To plan and conduct a workshop which will train attendees on the digitising national resources, digitisation techniques, on archiving and network techniques and on intellectual property issues	 Participants will be able to: list and archive of currently digitised resources in Vietnam display an understanding about how to set up a national network of digitised resources 	 Production of outputs in written form from each participant in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training materials and program by NACESTID staff to assess how the workshop meets their needs Workshop is well conducted and meets training needs 	 Participants' English language skills inadequate Workshop too advanced for participants' basic knowledge 	 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Workshop 3 (Information Services) To plan and conduct a workshop which will train attendees on indexing and abstracting techniques, on database standards and procedures and on controlled vocabulary (thesaurus) construction	 Participants will be able to: Create a basic index Set database standards Create a thesaurus structure 	 Production of outputs in written form from each participant in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices Evaluation of the workshop materials and program by NACESTID staff to assess how the workshop meets their needs. Workshop is well conducted and meets training needs 		 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Workshop 4 (<i>Needs Analysis for</i> <i>Fieldworkers</i>) To plan and conduct a workshop which will train attendees on techniques for needs analysis, how to identify community 'gatekeepers', how to train fieldworkers, and how to analyse training results	 Participants will be able to: analyse information needs in a typical community identify 'gatekeepers' in a typical community train other fieldworkers, and analyse the training outcomes for others 	 Production of outputs in written form from each participant in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices. Evaluation of the workshop materials and program by NACESTID staff to assess how the workshop meets their needs Workshop is well conducted and meets training needs 	 Participants' English language skills inadequate Workshop too advanced for participants' basic knowledge 	 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Workshop 5 (Information Presentation: Video) To plan and conduct a workshop which will train attendees on how to locate information resources for video production, instructional design techniques and, use of multimedia for information transfer	 Participants will be able to: locate appropriate information resources script for effective instructional outcomes use multimedia to transfer information train other trainers to create video 	 Production of outputs in visual form from teams of the participants in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs. Workshop is well conducted and meets training needs 	 Participants' English language skills inadequate Workshop too advanced for participants' basic knowledge 	 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Workshop 6 (Information Presentation: WWW) To plan and conduct a workshop which will train attendees on Web techniques for information dissemination, and Web- based multimedia resources	 Participants will be able to: Use the Web to disseminate information create multimedia resources on the Web train other trainers in Web access skills 	 Production of outputs in written form from each participant in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs Workshop is well conducted and meets training needs 	 Participants' English language skills inadequate Workshop too advanced for participants' basic knowledge 	 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Workshop 7 (Multimedia Presentation Skills) To plan and conduct a workshop which will train attendees on communication skills for presenters, and techniques for communicating on film and video	 Participants will be able to: practice communication skills on video present selected S&T information in appropriate formats train other trainers for work with regional staff and fieldworkers 	 Production of outputs in written form from each participant in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs Workshop is well conducted and meets training needs 		 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Workshop 8AdvancedDigitisationTechniquesDigitisationTo plan and conduct aworkshop which will trainattendees onunderstanding and usingnew digitisationtechnologies,understanding the location,significance and use ofheritage databases in Asia,andand understanding andapplying securityprovisions for digitisedmaterials/artefacts	 Participants will be able to: use new technologies in digitisation of resources format a Vietnamese heritage database introduce security measures to protect resources 	 Production of outputs in written form from each participant in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices Evaluation of the workshop materials and program by NACESTID staff to assess how the workshop meets their needs Workshop is well conducted and meets training needs 	 Participants' English language skills inadequate Workshop too advanced for participants' basic knowledge 	 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops

Narrative	Indicators	Means of verification	Risks/Constraints	Risk Management
Workshop 9 (Evaluation Techniques for Information Services) To plan and conduct a workshop which will train attendees on sustainable information systems/services, appropriate evaluation techniques/procedures, and how to maintain flexible infrastructures/services	 Participants will be able to: review NACESTID's networking policy select relevant techniques for NACESTID evaluate S&T information dissemination to selected communities put in place ongoing evaluation protocols 	 Production of outputs in written form from each participant in the workshop A survey of participants will evaluate the effectiveness of the training materials used, of the relevance of the material to their particular needs, and of the impact that the training may have on their work practices Evaluation of the workshop materials and programme by NACESTID staff to assess how the workshop meets their needs Workshop is well conducted and meets training needs 	 Participants' English language skills inadequate Workshop too advanced for participants' basic knowledge 	 Careful assessment as part of feasibility study and in preparation of material Use of feedback from previous workshops